

REMARKS

Claims 1-31 remain pending in this application. Claims 1, 11, 15-18, and 29 are independent. Claims 1, 8, 11, 15-18, 25, and 29 have been amended, and no claims have been added or canceled by this amendment.

Duplicate Claim Objection

Withdrawal of the objection to claim 17 under 37 CFR 1.75 as being a substantial duplicate of claim 16 is requested. Claim 17 has been amended in a manner that is believed to overcome the stated basis for objection.

Provisional Obviousness-Type Double Patenting Rejection

Withdrawal of the provisional rejection of claims 1-4, 11-12, and 15-17 on the grounds of non-statutory obviousness-type double patenting as being unpatentable over various stated claims of co-pending Application No. 10/904,333 is requested.

Applicants submit for the record that the rejection is improper, as the reference application claims a method for decoding multiword information using “segment erasure indicators”, which is significantly different from and cannot be obvious under any fair interpretation over the pending claims of the present application. The claims of the pending application are not obvious over the claims of the co-pending application because they do not teach or suggest all the presently claimed limitations.

Notwithstanding the deficient nature of the provisional rejection, and merely to expedite prosecution of the present application without prejudice or disclaimer, Applicants submit herewith a Terminal Disclaimer to provisionally disclaim patent term of the present application that would extend beyond any patent term that might result from the later-filed Application No. 10/904,333.

Anticipation Rejection By Jeon et al

Withdrawal of the rejection of claims 1-3, 5-8, 11-15, 18-22, 25-27 and 29-31 under 35 U.S.C. §102(b) as being anticipated by Jeon et al. (7,058,875) is requested.

Applicant notes that anticipation requires the disclosure, in a prior art reference, of each and every limitation as set forth in the claims.¹ There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. §102.² To properly anticipate a claim, the reference must teach every element of the claim.³ “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference”.⁴ “The identical invention must be shown in as complete detail as is contained in the ...claim.”⁵ In determining anticipation, no claim limitation may be ignored.⁶ The applied art fails to meet this threshold requirement, particularly with respect to independent claims 1, 11, 15-18, and 29, as amended.

Discussion of Jeon et al.

Jeon et al. is directed to a method of correcting data on a high-density recording medium such as a Blu-Ray[®] ROM or Read-Write disk wherein any error in a predetermined-sized Long-Distance Code (LDC) data block included in a physical cluster is determined based on if there is an error in sync data and Burst-Indicating Subcode (BIS) data neighboring the LDC data block. If the data is determined to be erroneous, error correction on the LDC block is conducted.

For example, at col. 3, lines 35-41 through col. 4, line 1-2 of Jeon et al. discloses a method of dividing 20-bit sync data into two 10-bit half blocks for determining whether an error exists in preceding or following LDC data.

¹ *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).

² *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991).

³ See MPEP § 2131.

⁴ *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

⁵ *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

⁶ *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 187 (Fed. Cir. 1990).

This approach is submitted as being irrelevant to Applicants' strategy of automatically switching to be more strict in sequence, as variously recited in the pending claims. Therefore, the strategy of the present application as recited by Applicants is not disclosed in Jeon et al.

Further, FIG. 5 of Jeon et al. discloses a BIS buffer 124 and a LDC block buffer 128 to store the BIS and LDC data after de-interleaving process. However, in accordance with Applicants' disclosed and claimed invention, the BIS is decoded to generate BIS erasure indicators (high protection codewords) stored in a second memory. It appears that Jeon's BIS buffer 124 is ahead of the BIS decoding unit along the data transmission path, so that the BIS buffer 124 cannot store any indicators generated by decoding BIS data.

Specific Deficiencies of Jeon et al.

The applied art does not disclose a method for decoding multiword information, wherein, among other features, "...marking an erasure bit for decoding the low protective codewords based on the high protective word erasure indicators close to any low protective codeword in the multiword information cluster, wherein the erasure bit is determined by automatically switching strategies to be more strict in sequence", as recited in independent claim 1, as amended.

Further, the applied art does not disclose a method for decoding multiword information, wherein, among other features, "...marking an erasure bit for decoding the low protective codewords based on high protective word erasure indicators close to any low protective codeword in the multiword information cluster, wherein the erasure bit is determined by automatically switching strategies to be more strict in sequence", as recited in independent claim 11, as amended.

In addition, the applied art does not disclose a method for decoding multiword information, wherein, among other features, "...marking an erasure bit for decoding the low protective codewords based on the sync erasure indicators close to any low protective codeword in the multiword information cluster, wherein the erasure bit is determined by automatically

switching strategies to be more strict in sequence”, as recited in independent claim 15, as amended.

Furthermore, the applied art does not disclose an apparatus for decoding multiword information which includes, among other features, “...an erasure generator coupled to the second memory for generating erasure bits for the low protective codewords...wherein the erasure bit is determined by automatically switching strategies to be more strict in sequence”, as recited in independent claim 18, as amended.

Finally, the applied art does not disclose an apparatus for decoding multiword information wherein, among other features, “...an erasure bit of a low protective codeword is marked if a high protective word erasure indicator of a high protective codeword close to the low protective codeword shows errors, and the erasure bit is determined by automatically switching strategies to be more strict in sequence”, as recited in independent claim 29, as amended.

Support for the above claim amendments, as well as the amendment of dependent claim 8, may be found at least at paragraphs [0036] - [0043] of the originally-filed disclosure.

Since the applied art does not disclose all the claimed limitations of independent claims 1, 11, 15, 18, and 29, as amended, reconsideration and allowance of claims 1-15 and 18-29 are respectfully requested.

Unpatentability Rejection over in View of Jeon et al. and Mori et al.

Withdrawal of the rejection of claims 4, 9, 10, 16, 17, 23, 24, and 28 under 35 U.S.C. §103(a) as being unpatentable over Jeon et al. in view of Mori et al. (US 7,055,082) is requested.

At the outset, Applicant notes that, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable

expectation of success. Finally, ***the prior art reference must teach or suggest all the claim limitations.***⁷ Further, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.⁸

Discussion of Mori et al.

Mori et al. is directed to an information recording and reproducing apparatus with improved error correction capability and descrambling performance. In one particular aspect, Mori et al. is directed to correction of errors in BIS column portions of the read-out data in response to parity data (see col. 37, lines 17-35). However, this reference does not appear to teach or suggest address field information, since address field information further comprises an address in addition to parity data.

With respect to dependent claims 4, 16, 17, and 23, the Examiner offers Mori et al. as teaching that BIS codes include address field information, and that the high protective word erasure indicators are determined by decoding errors or address comparison faults of the address field information.

The formulation of the rejection of dependent claims 9, 10, and 28 are believed to be somewhat in error, as the Examiner appears to state in paragraphs 27 and 28 on page 12 of the Official Action that Mori et al. teaches each limitation of these claims.

Notwithstanding whether or not Mori et al. teaches or suggests that for which the Examiner offers it, Mori et al. does not make up for the previously identified deficiencies of independent claims 1 and 18, from which dependent claims 4, 9-10, 23-24, and 28 variously and ultimately depend.

⁷ See MPEP §2143.

⁸ *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and See MPEP §2143.

In addition, the applied art, either alone or in combination, does not teach or suggest a method for decoding multiword information wherein, among other features, "...marking an erasure bit for decoding the low protective codewords based on the address field information/user control data erasure indicators close to any low protective codeword in the multiword information cluster, wherein the erasure bit is determined by automatically switching strategies to be more strict in sequence", as recited in independent claim 16, as amended.

Finally, the applied art, either alone or in combination, does not teach or suggest a method for decoding multiword information wherein, among other features, "...marking an erasure bit for decoding the high protective codewords based on the address field information/user control data erasure indicators close to any high protective codeword in the multiword information cluster, wherein the erasure bit is determined by automatically switching strategies to be more strict in sequence", as recited in independent claim 17, as amended.

Accordingly, since the applied art does not teach or suggest all the claimed limitations, as amended, reconsideration and allowance of claims 4, 9, 10, 16, 17, 23, 24, and 28 are respectfully requested.

Conclusion

In view of the above amendment and remarks, Applicants believe that each of pending claims 1-31 in this application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number indicated below.

For any fees that are due, including fees for extensions of time, excess claims, or Terminal Disclaimer, the Director is hereby authorized to charge any fees or credit any

overpayment during the pendency of this application to CBLH Deposit Account No. 22-0185, under Order No. 22171-00024-US1 from which the undersigned is authorized to draw.

Dated: January 23, 2007

Respectfully submitted,

Electronic signature: /Larry J. Hume/
Larry J. Hume
Registration No.: 44,163
CONNOLLY BOVE LODGE & HUTZ LLP
1990 M Street, N.W., Suite 800
Washington, DC 20036
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant

Attachment: Provisional Terminal Disclaimer